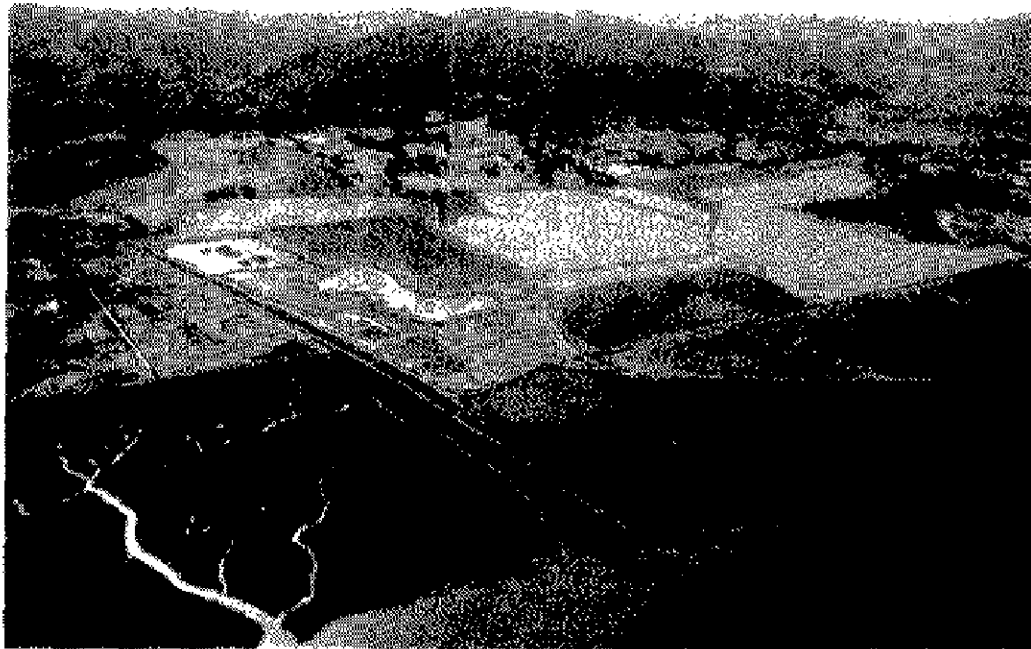


FI-110 9/18/97 11:35
CALFED PROPOSAL

1997 CATEGORY III

JULY 24 1997



TITLE: MILLER CREEK RESTORATION FEASIBILITY STUDY

APPLICANT: MARIN CONSERVATION LEAGUE
55 MITCHELL BLVD., SUITE 21
SAN RAFAEL, CA 94903
TEL.#(415)472-6170/FAX#(415)472-1404

COLLABORATOR: QUESTA ENGINEERING CORPORATION
P.O. BOX 70356
1220 BRICKYARD COVE ROAD
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TEL.#(510)236-6114/FAX#(510)236-2423

I. Executive Summary

a. Project Title and Applicant Name Miller Creek Restoration Feasibility Study. Marin Conservation League.

b. Project Description and Primary Biological/Ecological Objectives Re-configure the channel location, restore the channel meander and the natural physical processes of the lower portion of Miller Creek. Reduce and mitigate the stressors resulting from the ditching and angling of the lower portion of Miller Creek. Restore natural salinity gradients at the creek mouth. Restore natural physical processes and, thereby, enhance the creek and saline emergent wetlands habitat for steelhead trout, splittail, migratory birds including the mallard and pintail and a variety of neo-tropical migratory birds.

c. Approach/Tasks/Schedule Phase one of the project, and the focus of this Category III proposal, is to commission a study to determine the available options for re-configuring and restoring the lower portion of Miller Creek. The feasibility study will focus on the engineering and hydrologic issues of channel reconfiguration, potential land acquisition needs, new levees and any necessary hydraulic structures and implementation costs. The results of the study would also provide detailed habitat information which could be used to more accurately assess the biological/ecological benefits which would result from the actual project and define restoration parameters. The study would be completed by Questa Engineering Corporation as collaborator and is estimated to take nine months. However, if necessary, MCL is prepared to develop and release a RFP for professional services to complete the feasibility studies, instead of a sole source contract with Questa.

d. Justification for Project and Funding by CALFED This proposal will lead to restoring high risk habitat for high risk species and provide broad ecosystem benefits. The Miller Creek watershed is listed as one of the Bay Areas high scorers for ecological integrity, based on a study conducted by Rob Leidy of the U.S. Environmental Protection Agency. Steelhead trout inhabit Miller Creek and the probabilities are high that the Splittail, with proper restoration, could become an inhabitant. Other priority species such as the mallard and the pintail and a variety of neotropical migratory birds inhabit the area surrounding the proposed restoration site. As stated by Wayne S. White, Field Supervisor, U.S. Fish and Wildlife Service: "Restoration of the lower reaches of Miller Creek to a natural stream channel would provide valuable instream habitat for Sacramento splittail and steelhead and enrich surrounding riparian, wetland and upland habitats for migratory waterfowl and other migratory birds." (SEE EXHIBIT G, support letter, U.S. Fish and Wildlife Services). Restoration of Miller Creek does not conflict with CALFED non ecosystem goals. The proposal has the potential of improving the water quality of the Bay, through restoration of a floodplain to drop silt loads and associated urban runoff contaminants. For a relatively small investment CALFED has the opportunity to start in motion the process for the full restoration of the Miller Creek watershed, and, thereby, assure the long term enhancement of habitat for priority species and the improvement of Bay water quality.

e. Budget Costs and Third Party Impacts The cost of the proposed evaluation study is \$75,000. Las Gallinas Valley Sanitary District has indicated that the re-configuration of the creek channel may, in fact, benefit their facility, because of reduced silting and flood hazard. The feasibility study would determine if it is possible to restore the Lower Miller Creek channel without impacting drainage or flooding on adjacent lands, and/or what measures would be needed to mitigate increased flood hazard.

f. Applicant Qualifications The Marin Conservation League (MCL) is the oldest Marin County environmental organization. MCL has an Endowment of over \$900,000, a staff of 4 and an office facility. MCL's operating expenses have been funded in part by a \$80,000 annual grant

from the Marin Community Foundation for the last 10 years. Renewal of the grant is dependent on MCL achieving its yearly goals and complying with the terms of the grant. MCL believes that it is well qualified to supervise and assure compliance with the terms of the proposed restoration feasibility study.

g. Monitoring and Data Evaluation If the study shows that the channel restoration project proves feasible, then the project plans would include a monitoring element to gauge project success. This would likely include monitoring of tidal cycle elevations, sediment accumulation in the channels, salinity and water quality parameters, and species abundance and diversity for both restored plant community, wildlife and fisheries. Success criteria would be established, and management interventions would be initiated for project elements not achieving project goals and objectives.

h. Local Support/Coordination with other Programs/Compatibility with CALFED objectives The feasibility study is supported by a primary land owner (Las Gallinas Valley Sanitary District). the long term goals of the California State Lands Commission, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Services, the Calif. Dept. of Fish and Game and the major environmental organizations of Marin County. The proposed feasibility study is compatible with the County's efforts to protect and restore the Miller Creek watershed. The proposed feasibility study, if subsequently implemented by an actual project, would improve and/or increase aquatic and terrestrial habitats, improve ecological functions and provide good water quality for the bay.

II. Title Page

a. Title of Project Miller Creek Restoration Feasibility Study

b. Name of Applicant/principal investigator; address; phone/fax/E-mail; organizational, institutional or corporate affiliations of applicant/principle investigator Marin Conservation League (MCL)/Bayfront Committee Co-Chair, Frank Nelson; 55 Mitchell Blvd., Suite 21, San Rafael, CA 94903; (415)472-6170/fax(415)472-1404/mcl@nbn.com; Frank Nelson is an MCL board member.

c. Type of Organization and Tax Status Nonprofit, environmental organization. Marin Conservation League is exempt from California and federal taxes within the provisions of Section 23701d of the California Revenue and Taxation Code, and under Section 501(c)(3) of the Internal Revenue Code.

d. Tax Identification Number 94-6089780

e. Technical and Financial Contact persons MCL Bayfront Committee Co-Chair, Frank Nelson. Same address as in b. above. Collaborator, Questa Engineering Corporation representative, Jeffrey H. Peters, R.E.A., P.O. Box 70356, 1220 Brickyard Cove Road, Point Richmond, CA 94807-0356. Tel.# (510) 236-6114, Fax # (510) 236-2423.

f. Participants/Collaborators in Implementation Questa Engineering Corporation of Point Richmond would be a collaborator in completing the studies, under contract to MCL. Their project Principal, Mr. Jeffrey Peters, would donate 10% of the project budget (\$7,500.00) as in-kind professional services. Much of this is expected to be spent in meetings with agencies and MCL staff, historic research, and discussions with adjacent property owners. Mr. Peters regularly donates his professional services on environmental restoration projects, including several successfully implemented projects in Petaluma, California.

g. RFP Project Group Type Study (Feasibility Evaluation)

III. Project Description.

a. Project Description and Approach To evaluate the feasibility, cost and ecological benefits of restoring the lower portion of the Miller Creek watershed. Miller Creek is approximately six miles in length and is fed from a watershed area of approximately 5120 acres (8.5 sq. miles). Amazingly, for a creek located within a developed area, the natural creek bed, with one major exception, is basically intact. Steelhead trout migrate to the upper portions of the Creek. The major exception is the diversion and ditching of the creek which occurs along the lower portion (below the former NWP railroad tracks) which flows into San Pablo Bay. The area which would be addressed in the feasibility study is shown on EXHIBIT A in Photos 1 and 2. For reference purposes, the railroad tracks are highlighted in Photo 2.

Photo 1 shows the present course of Miller Creek along its lower section. The Creek is ditched east of the railroad tracks where it runs for a short distance and then takes a 90 degree turn to the south, running behind the Las Gallinas Valley Sanitary District ponds where it then takes another 90 degree turn to the east, running straight out to San Pablo Bay. The photo in EXHIBIT B shows this final portion of the ditch as it runs along the south side of the Sanitary District Ponds out to San Pablo Bay. Photo 2 on EXHIBIT A, by means of a blue line (white line on a black and white photo), shows the area on the north side of the Sanitary District Ponds which will be the subject of the proposed restoration feasibility study.

Questa Engineering Corporation, a project collaborator, will prepare the feasibility study. MCL, the project sponsor, will act as the monitor to assure compliance with the Questa proposal. The feasibility study is estimated to take nine months and cost \$75,000.

b. Location of project Miller Creek is located in Marin County within the Miller Creek watershed. The proposed study area is located along the lower portion of Miller Creek just before it enters into San Pablo Bay. (SEE EXHIBIT C, map of proposed study area)

c. Expected Benefits

Stressors: The primary stressors are from alteration of channel form and prevention of channel meander due to realignment and confinement within a narrow levee section. The resulting channel has virtually no marsh plain for fine sediment deposition and the former natural floodplain functions of the surrounding agricultural lands have been eliminated. The small emergent marsh community within the existing channel section is isolated and the overall habitat mosaic of the area is fragmented and but a small relief of its historical condition.

The loss of floodplain/marshplain functions and values also means the loss of the natural capacity of these areas to assimilate and attenuate the urban runoff contaminants and fine suspended sediment prior to discharge to the Bay. The resultant San Pablo Bay water quality is thus impacted by urban uses in the Miller Creek watershed and also by the Highway 101 corridor.

Open land area is available to reconfigure Miller Creek into a restored floodplain/marshplain section with a natural meandering stable channel, with natural side channels and tributaries, aimed at restoring the natural physical processes of the creek, and enhancing its biological functions and values.

Habitats: the study will address the opportunities and ecological benefits of restoring the natural salinity gradient at the creek mouth, thereby enhancing the saline emergent wetlands habitat which is favored by the splittail and the striped bass. The movement corridor for steelhead would also be improved.

Species: Steelhead trout, splittail, migratory birds, including mallard, pintail and neotropical migratory birds. The U.S. Department of the Interior, Fish and Wildlife Service, National Wetland Inventory Maps list 165 species of birds sighted within the vicinity of the proposed study area. MCL can, upon request, provide CALFED with a copy of the inventory maps list. Steelhead trout presently inhabit Miller Creek. The proposed feasibility study will describe a restored creek alignment which will address the reduction of the stressors resulting from channeling the creek into a ditch and will evaluate the enhanced habitats created by introducing a meandering creek flow and restoring the natural physical processes of the creek. This information can be used to evaluate the benefits which will incur to the steelhead trout, the wide range of migratory birds and the potential for providing valuable habitat for the splittail. (SEE EXHIBIT D, Bill Cox letter, fisheries biologist, Calif. State Dept. of Fish and Game) The above are primary ecological benefits. There are, furthermore, compelling secondary benefits. The area where Miller Creek flows into San Pablo Bay is unique in Marin County, and, indeed, around San Francisco Bay (SEE EXHIBIT E, support letter, Michael Vasey, Department of Biology, San Francisco State University). The area is composed of an unfragmented, rich diversity of habitats, including tidal marsh, seasonal wetlands, grasslands, vernal pools and valley oaks. (See EXHIBIT A photos). This habitat diversity supports an incredible diversity of species, including the endangered Clapper rail and the Salt marsh harvest mouse. A re-configured and restored Miller Creek would be the center piece of this diverse landscape. A Miller Creek restoration feasibility study would add substance to an educational campaign to inform the public about the connection between restored and healthy watersheds and the water quality and health of the Bay-Delta ecosystem. MCL with its large membership, newsletter and media access would like to participate in getting this message out to the public and to further CALFED goals.

The potential project (re-configuration and restoration of Miller Creek) which is the subject of the proposed feasibility study, would not conflict with CALFED non-ecosystem objectives. The project would benefit the CALFED goal of providing good water quality for the bay. Las Gallinas Valley Sanitary District, a third party, has expressed the view that re-configuring the creek to its historic alignment and removing the creek flow from the ditch which runs by the District ponds could be a benefit to them in that it would eliminate the burden of having to deal with the silting-up of the ditch. MCL has met with Elizabeth Lewis, Creek Naturalist, Marin County Department of Public Works to discuss our CALFED proposal for a feasibility study and to discuss the overall quality of Miller Creek, including the County's efforts to solve creek erosion problems along upper portions of Miller Creek. Our feasibility study is compatible with the County's efforts to protect and improve the quality of the Miller Creek watershed.

d. Background and Biological/Technical Justification

The photo contained in EXHIBIT B shows the channel ditch portion of Miller Creek as it flows along the south side of the Sanitary District ponds into San Pablo Bay. The proposed feasibility study will describe a re-configured creek bed, with restored natural physical processes, meandering within a restored estuarine floodplain corridor in the area north of the ponds.

Preliminary opinions from Rob Leidy, fish biologist, U.S. Environmental Protection Agency (SEE EXHIBIT F), Bill Cox, fish biologist, Calif Dept. of Fish and Game (SEE EXHIBIT D) and Wayne S. White, Field Supervisor, U.S. Fish and Wildlife Services (SEE EXHIBIT G) are that a re-configured and restored Miller Creek with an associated estuarine floodplain and marsh will create and/or enhance habitats for fish and migratory birds, including priority species such as the steelhead trout and the Sacramento splittail.

The feasibility study will define the actions needed and their costs for habitat restoration thereby providing the opportunity to obtain further expert opinion regarding the biological benefits and technical justification, prior to the commencement of the actual project. This will be accomplished through workshops and meetings with agency personnel, adjacent property owners, and interest groups.

e. Proposed Scope of Work

Questa Engineering, located in Point Richmond, Calif., has been the principal designer of numerous successful marsh and creek restoration projects. These include Adobe Creek and the Petaluma River within the City of Petaluma, as well as Sanchez Creek Lagoon in Burlingame. The scope of the feasibility study is to describe the work required to restore the lower portion of Miller Creek. The feasibility study will examine the following issues:

- Topographic constraints to restoration of the marsh plain
- Possible use of dredge material
- Increased flood hazard from shortening tide channel length
- Channel siltation and sedimentation, and long term maintenance needs
- New levee construction requirements and stability issues
- Salinity/water quality and mosquito control
- Grading, hydraulic structures and restoration planting
- Land acquisition needs
- Capitol improvements and maintenance costs

According to the 1871 Allardt map of the area, lower Miller Creek originally discharged through at least three tributaries on a pickleweed marsh plain, before entering San Pablo Bay. The marsh plain was diked off and drained (reclaimed) for hay farming around the turn of the century and Miller Creek was re-routed through a narrow constructed/leveed channel further to the south. The altered channel takes several right turns, and is at least three times longer than its original length. There are no tide gates on the re-aligned Miller Creek Slough Channel.

Restoring Miller Creek to its historic shorter alignment must consider the fact that the now greatly dampened tidal heights at the railroad crossing could be increased, possibly causing backwater flooding effects during significant storm discharge periods at Highway 101. This could be managed by allowing the restored Miller Creek to circuitously meander within a heavily vegetated, diked corridor, to provide the required dampening effect. A probably less preferred alternative would be to include an off-channel flood detention storage facility and adjustable hydraulic structures to better control tide stage and flooding. These and other grading and hydraulic management alternatives would be analyzed through use of hydro-dynamic models to develop the Preferred Alternative and Restoration Concept Plan. The study is expected to take nine months to complete.

Work Program: The following work program would be completed in developing a concept Restoration/Enhancement Plan for Miller Creek. The work program is based on the typical approach utilized by the State Coastal Conservancy in its Enhancement Planning efforts. The approach focuses on: 1) developing project goals and objectives, 2) developing and analyzing resource inventory information, 3) completing an analysis of sensitivities/constraints/management needs, and enhancement opportunities, 4) developing and screening alternatives, 5) hydrologic analysis of alternatives, 6) developing draft and final Enhancement Plans, 7) develop Implementation Program, including cost estimate, and 8) complete CEQA documentation, and permit application. Since hydrology is key to wetlands and riparian enhancement, a major focus of the work is preparing accurate topographic maps for hydrologic evaluation, and developing computer models of existing conditions and for alternatives analysis. Central to the planning approach is communication and dialogue between the public, agencies, and special interest groups to achieve consensus. The final Enhancement/ Restoration Plan includes identification of permits and design requirements, prioritization of capital improvements, maintenance requirements and a recommended implementation schedule. Although the plan would be conceptual, it will provide sufficient information and guidance for approval and permitting, construction cost estimating, and for easy translation into construction drawings.

Work Tasks: Tasks to be completed in the Planning Studies: 1) Define project goals and objectives, 2) Prepare topographic map/survey of planning area from Highway 101 to San Pablo Bay [Scale 1"= 100'. 1 c. 1], 3) Complete biological investigation focused on existing fisheries, water quality, and aquatic habitat. Utilize common, agency-accepted protocols for mapping and sampling, [i.e. Fossi for fisheries/fish habitat, Sawyer-Keeler-Wolf for plant communities], 4) Complete hydrologic/hydraulic analysis of existing conditions. Examine tidal exchange and water surface profile (flood stage) for various return-frequency events [i.e. 10, 25, 100 yr. flood/tide]. Construct hydro-dynamic model using such models as Est-Flow, DWOPER, Fast-tabs-2, and or HEC-RAS, 5) Conduct sensitivities/constraints/opportunities analysis, 6) Identify restoration/enhancement alternatives, 7) Test hydraulic feasibility of alternatives, focused on insuring passive tidal inflow/outflow and minimal need for channel stability/sediment maintenance, with no effect on stormwater flooding at Highway 101, 8) Select preferred alternative through consultation with agencies, interested public and non-profit groups, 9) Further define and develop preferred alternative into draft and final restoration plan including: conceptual grading and hydraulic structures, planting, in-stream fisheries structures, public access [if any], illustrative plan and cross sections, implementation plan [prioritization of improvements], and schedule, permit/mitigation-requirements, design and construction cost estimates, 10) Meetings and project management, 11) Complete CEQA Initial study and permit applications.

Deliverables: The following documents will be prepared:

- Statement of project goals and objectives
- Existing conditions report:
 - biology
 - hydrology
 - ownership and infrastructure
- Alternatives report
- Draft Concept Plan
- Final Plan
- Implementation plan and cost estimate
- CEQA initial study
- Permit applications (404,401,1601)

f. Monitoring and Data Evaluation

A certain amount of monitoring and data evaluation will go into the development of the Enhancement Plan. This will include monitoring of tide heights, tidal elevations, and water quality (particularly sediment and salinity) at various fixed points along Miller Creek. This information will be used to test and calibrate the project hydrologic model. Channel cross-sections will be surveyed and fixed stations established. Biological information to be collected, includes abundance and species diversity, particularly for fish, following standard agency protocols.

If the restoration project proves feasible, then this baseline monitoring information and data collection methodology can be repeated following project construction. The fixed cross sections can be re-surveyed to determine the degree of channel siltation; new tide height and salinity information can be collected, and biological diversity and abundance can be checked against pre-project data to test whether project Goals and Objectives and Success Criteria are being met. A flexible management approach would be taken to modify project features to meet project objectives.

g. Implementability

Implementation of the feasibility study proposal merely requires completion of the study. However, because it would not make any sense for CALFED to fund a feasibility study, if the recommendations of the study could never be implemented, MCL has researched the relevant land parcels in an effort to discover any impediments to a future restoration.

The potential creek restoration area could involve three landowners. The Las Gallinas Valley Sanitary District is a primary land owner. Our major concern was that a re-configuration of the creek bed might conflict with technical requirements of the Sanitary District. This turns out not to be the case. In fact, the District favors the re-configuration. (SEE EXHIBIT H, support letter, Las Gallinas Valley Sanitary District). The second owner of lands which could be involved in a creek restoration is the Archdiocese. The portion of these lands within the potential restoration area is diked baylands used for growing hay. MCL has written a letter to the Archdiocese informing them of our CALFED proposal for a feasibility study and requesting their cooperation. We have not yet received a response. It should be noted that the Archdiocese is in the process of trying to develop and/or sell its land holdings at this Marin location. The third landowner is the California State Lands Commission which owns the salt marsh portion of the area leading out to San Pablo Bay. We do not anticipate any problem in obtaining their cooperation. In fact, the Commission owns a easement across the Archdiocese lands, which, when obtained within the last couple of years, was related to a future restoration of Miller Creek.

MCL, through its web site (www.nbn.com/mcl) is preparing information to outreach to the public, explaining our efforts to restore Miller Creek and requesting public involvement. The major environmental organizations of Marin support restoration of Miller Creek, including, Sierra Club, Marin Chapter, Audubon and The Environmental Forum of Marin.

IV. Costs and Schedule to Implement Proposed Project

a. Budget Costs

The only cost item for the feasibility study is the cost of the study which is \$75,000. (SEE TABLE I, attached hereto).

b. Schedule Milestones

The start date would relate to the approval date by CALFED. Once the proposal was approved by CALFED and the necessary contract papers were completed and signed then the feasibility study could commence. The completion date would be nine months from the start date. The payment schedule would coincide with delivery of report items (e.g. Existing Conditions, Alternatives, etc.) and would likely be three payments at three, six and nine months.

c. Third Party Impacts

Because this proposed project consists solely of an informational feasibility study, we see no anticipated or potential third party impacts related to the process of gathering and analyzing information. The feasibility study would address potential third party impacts such as increased flood hazards and drainage.

TABLE 1
Cost Estimate

Project Phase and Task	Staff Member	Rate	Hours	Direct Salary Benefits	Overhead Labor	Subtotal Labor Costs	Service Contracts	Material & Acquisition Contracts	Misc. & Other Direct Costs	Task Totals
Task 1 - Define Project Goals & Objectives	Project Manager	\$108	8	\$36	\$72	\$864	---	Misc. Materials	Travel \$50	\$914
	Senior Staff	\$75	20	\$25	\$50	\$1,500	Surveying \$15,000	\$500	---	\$17,000
	Staff	\$48	---	\$18	\$36	---	---	---	---	---
	Technicians	\$36	---	\$12	\$24	---	---	---	---	---
	Clerical/ Drafting	\$45	10	\$15	\$30	\$450	---	---	---	\$450
										\$18,391
Task 2 - Prepare Topographic Base Map	Project Manager	\$108	2	\$36	\$72	\$216	---	Supplies (\$100)	Travel (\$100)	\$416
	Senior Staff	\$75	12	\$25	\$50	\$900	---	---	---	\$900
	Staff	\$48	---	\$18	\$36	---	---	---	---	---
	Technicians	\$36	2	\$12	\$24	\$72	---	---	---	\$72
	Clerical/ Drafting	\$45	6	\$15	\$30	\$270	---	---	---	\$270
										\$1,658
Task 3 - Complete Biological Investigations - Existing Conditions	Project Manager	\$108	8	\$34	\$68	\$864	---	---	---	\$864
	Senior Staff	\$75	20	\$25	\$50	\$1,500	---	---	Travel (\$300)	\$1,800
	Staff	\$48	60	\$18	\$36	\$2,880	---	Supplies (\$400)	Copy (\$100)	\$3,380
	Technicians	\$36	10	\$12	\$24	\$360	---	---	---	\$360
	Clerical/ Drafting	\$45	30	\$15	\$30	\$1,350	---	---	---	\$1,350
										\$7,754

TABLE #1

Questa Engineering Corporation

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Project Phase and Task	Staff Member	Rate	Hours	Direct Salary Benefits	Overhead Labor	Subtotal Labor Costs	Service Contracts	Material & Acquisition Contracts	Misc. & Other Direct Costs	Task Totals
Task 4 - Complete Hydrologic Investigations - Existing Conditions	Project Manager	\$108	8	\$34	\$68	\$864	---	Misc. Supplies (\$100)	Travel (\$100)	\$964
	Senior Staff	\$75	40	\$25	\$50	\$3,000	---	(\$100)	Copy (\$100)	\$3,200
	Staff	\$48	40	\$18	\$36	\$1,920	---	---	---	\$1,920
	Technicians	\$36	10	\$12	\$24	\$360	---	---	---	\$360
	Clerical/ Drafting	\$45	10	\$15	\$30	\$450	---	---	---	\$450
Task 5 - Determine Sensitivities & Constraints Analysis	Project Manager	\$108	10	\$34	\$68	\$1,080	---	---	Travel (\$50)	\$1,130
	Senior Staff	\$75	20	\$25	\$50	\$1,500	---	---	Copy (\$100)	\$1,600
	Staff	\$48	20	\$18	\$36	\$960	---	---	---	\$960
	Technicians	\$36	---	\$12	\$24	---	---	---	---	---
	Clerical/ Drafting	\$45	30	\$15	\$30	\$1,350	---	---	---	\$1,350
Task 6 - Develop & Screen Alternatives	Project Manager	\$108	10	\$34	\$68	\$1,080	---	---	Travel (\$100)	\$1,180
	Senior Staff	\$75	20	\$25	\$50	\$1,500	---	---	Copy (\$100)	\$1,600
	Staff	\$48	20	\$18	\$36	\$960	---	---	---	\$960
	Technicians	\$36	---	\$12	\$24	---	---	---	---	---
	Clerical/ Drafting	\$45	10	\$15	\$30	\$450	---	---	---	\$450
										\$4,190

Project Phase and Task	Staff Member	Rate	Hours	Direct Salary Benefits	Overhead Labor	Subtotal Labor Costs	Service Contracts	Material & Acquisition Contracts	Misc. & Other Direct Costs	Task Totals
Task 7 - Hydrologic/Hydraulic Analysis of Alternatives	Project Manager	\$108	18	\$34	\$68	\$1,944	---	---	Copy (\$100)	\$2,044
	Senior Staff	\$75	25	\$25	\$50	\$1,875	---	---	Travel	\$1,875
	Staff	\$48	20	\$18	\$36	\$960	---	---	\$50	\$1,010
	Technicians	\$36	10	\$12	\$24	\$360	---	---	---	\$360
	Clerical/ Drafting	\$45	10	\$15	\$30	\$450	---	---	---	\$450
										\$5,739
Task 8 - Select Preferred Alternative	Project Manager	\$108	10	\$34	\$68	\$1,080	---	---	Travel	\$1,080
	Senior Staff	\$75	10	\$25	\$50	\$750	---	---	\$50	\$800
	Staff	\$48	---	\$18	\$36	---	---	---	Copy	---
	Technicians	\$36	---	\$12	\$24	---	---	---	\$50	\$50
	Clerical/ Drafting	\$45	10	\$15	\$30	\$450	---	---	---	\$450
										\$2,380
Task 9 - Develop Draft & Final Restoration Plan	Project Manager	\$108	20	\$34	\$68	\$2,160	---	---	---	\$2,160
	Senior Staff	\$75	40	\$25	\$50	\$3,000	---	---	Travel	\$3,000
	Staff	\$48	40	\$18	\$36	\$1,920	---	---	\$150	\$2,070
	Technicians	\$36	10	\$12	\$24	\$360	---	---	Copy	\$360
	Clerical/ Drafting	\$45	40	\$15	\$30	\$1,800	---	---	\$300	\$2,100
										\$9,690

Project Phase and Task	Staff Member	Rate	Hours	Direct Salary Benefits	Overhead Labor	Subtotal Labor Costs	Service Contracts	Material & Acquisition Contracts	Misc. & Other Direct Costs	Task Totals
Task 10 - Meetings & Project Management	Project Manager	\$108	36	\$34	\$68	\$3,888	---	---	Travel	\$3,888
	Senior Staff	\$75	20	\$25	\$50	\$1,500	---	---	(\$100)	\$1,600
	Staff	\$48	---	\$18	\$36	---	---	---	---	---
	Technicians	\$36	---	\$12	\$24	---	---	---	---	---
	Clerical/ Drafting	\$45	---	\$15	\$30	---	---	---	---	---
										\$5,488
Task 11 - CEQA Initial Study & Permitting	Project Manager	\$108	20	\$34	\$68	\$2,160	---	---	Travel	\$2,160
	Senior Staff	\$75	30	\$25	\$50	\$2,250	---	---	\$50	\$2,300
	Staff	\$48	30	\$18	\$36	\$1,440	---	---	Copy	\$1,440
	Technicians	\$36	---	\$12	\$24	---	---	---	\$100	\$100
	Clerical/ Drafting	\$45	30	\$15	\$30	\$1,350	---	---	---	\$1,350
										\$7,350
TOTAL							\$15,000	\$1,100	\$2,050	\$74,574

V. Applicant Qualifications

Organized in 1934, the Marin Conservation League (MCL) is the oldest Marin County environmental organization (SEE EXHIBIT I, page 4 of the MCL 1996 Annual Report showing the 1996 balance sheet and a list of the staff and board members). During its early years MCL took the lead in the creation of a wide range of parks and open spaces in Marin County, including: Angel Island; Mt. Tamalpais; Samuel P. Taylor State Park; Stinson Beach; Pt. Reyes National Seashore and many others. In more recent years MCL has become involved in political action in support of conservation and environmental protection and in public education in environmental issues.

MCL has a wide range of environmental issue committees which study environmental issues and recommend action. MCL has an endowment fund of over \$900,000, a staff of four and an office facility. Part of MCL's operating budget is funded by a grant from the Marin Community Foundation. This grant has been renewed periodically for 10 years in the amount of \$80,000 per year. Renewal of the grant is dependent on MCL achieving its yearly goals and complying with the terms of the grant. MCL believes that it is well qualified to supervise and assure compliance with the terms of the restoration evaluation proposal.

Collaborator: Questa Engineering Corporation. Questa Engineering Corporation is an environmental and water resources engineering and planning firm providing government and private industry with consulting services in all phases of hydrology, water resources and watershed investigations. The firm was founded in 1982 and is headquartered in Point Richmond, California.

One of Questa's primary areas of technical specialization is surface water hydrology, including river and bay hydraulics, watershed management, erosion control and water quality management. The firm is also known for its technical expertise in wetlands hydrology for restoration and enhancement planning. Along with Questa's affiliates, the firm provides complete services in wetland and creek restoration and enhancement, from initial concept plans and feasibility studies through final design drawings and supervision of implementation and construction. The firm's principals and senior staff include experienced civil and geotechnical engineers, hydrologists and environmental scientists with extensive experience in a wide range of hydrological and biological environments and kinds of projects. These have ranged from field investigations, resource inventories and hydrologic and water quality monitoring to sophisticated watershed runoff modeling and river hydraulics, which evaluate problems of bank erosion and sedimentation and test various stabilization and enhancement approaches. Restoration and enhancement plans completed by Questa include the Petaluma River in Petaluma and Novato, the Napa River, Lower Adobe Creek and Lynch Creek in Petaluma, at Hercules, on San Pablo Bay, a large project along the Hayward shoreline at Coyote Hills Regional Park, Sanchez Creek Lagoon on the peninsula, and the Leslie Salt Ponds near Union City and Hayward. A number of these projects have been constructed based on plans and specifications prepared by Questa.

Project Study Team Members. The project team members possess outstanding technical expertise and experience, covering all essential disciplines pertinent to the project. Mr. Jeffrey Peters, Senior Wetland Scientist/Hydrologist will assume overall project management responsibility for Questa's Scope of Work. He will be joined by Questa staff hydrologist Amy Luers, Restoration Specialist Margaret Henderson, and by consulting biologist and enhancement specialist Dr. Sam McGinnis. Norman Hantzsche, P.E. will provide quality control review and internal consultation. The senior staff and principals of Questa have more than 20 years of

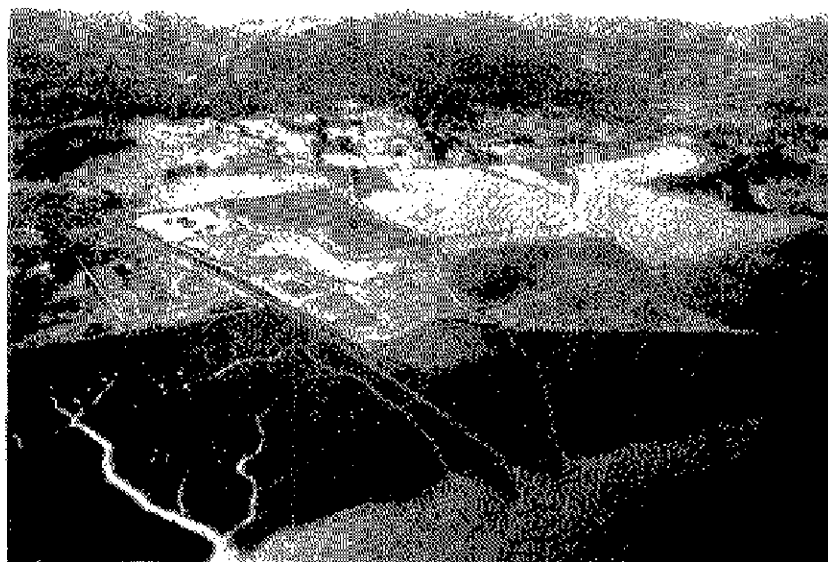
experience in environmental restoration and management, including riparian and tidal marsh restoration.

Dr. Sam McGinnis (Professor, Hayward State University) and consulting wildlife and fisheries biologist, will also provide important input to the development of the restoration or management plan and any required inventory or monitoring. As an ecologist specializing in the aquatic and terrestrial wildlife and plants of the greater San Francisco Bay Area, Dr. McGinnis will assess habitat types and conditions at the study area, and address options for habitat restoration and management. His major consulting activities in recent years have been centered around endangered and threatened plant and animal species. He is the author of a popular book on freshwater fisheries of California. The majority of his recent work has been conducted for government agencies such as the U.S. Fish and Wildlife Service, the California Department of Fish and Game, the California Department of Transportation, the California Department of Parks and Recreation, and the planning departments of San Mateo, Alameda, and Contra Costa Counties. Dr. McGinnis has worked with Questa on enhancement plans for the Petaluma River Marsh, Rush Creek Marsh, Adobe Creek and the Coyote Hills wetlands restoration plan.

VI. Compliance with Standard Terms and Conditions

We have reviewed the contract terms and conditions and find them to be fully acceptable. One of the terms is for release of an RFP for professional service contracts to three prospective consultants. Questa Engineering Corporation is a project collaborator and would donate services-in-kind at 10% of the contract price (roughly project profits). Accordingly, we would request that CALFED waive this provision, if possible. MCL is, however, prepared to develop and release an RFP for professional services to three qualified firms specializing in wetland hydrology and restoration.

Enclosed is an executed Non-Discrimination Compliance Statement for MCL and Questa, along with their Small Business Preference Certification. Other forms would be provided at the time of contract signing, such as Drug-Free Workplace, and Certificate of Insurance.



West



South

East

43

42

North

EXHIBIT A

I - 0 0 2 4 8 4

I-002484



EXHIBIT B

I - 0 0 2 4 8 5

I-002485

STATE OF CALIFORNIA--THE RESOURCES AGENCY

PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME

POST OFFICE BOX 47
FOUNTAINVILLE, CALIFORNIA 94599
(707) 944-5500

July 25, 1997

Mr. Frank Nelson
Marin Conservation League
55 Mitchell Avenue, Suite 21
San Rafael, California 94903

Dear Mr. Nelson:

This letter is written in support of your proposal for restoration planning in the lower reaches of Miller Creek, tributary to San Pablo Bay. Miller Creek supports a small run of steelhead trout and has the potential, with habitat restoration, for supporting more. Riparian habitat along the stream has been reduced, and erosion and sedimentation have been increased, by past land use practices. Efforts are underway in the upper watershed to reverse this. Improvements to the lower reaches of the stream could improve access for adult steelhead and nursery habitat for juveniles on their way to the ocean. Restoration of marsh areas could provide feeding habitat for salmon, striped bass, and other estuarine fishes. Restoration of lower Miller Creek could also provide additional spawning habitat for the Sacramento splittail which spawns in the nearby Petaluma River.

If you have questions regarding our comments, contact Mr. Bill Cox, Associate Fishery Biologist, at (707) 823-1001.

Sincerely,

Brian Hunter
Regional Manager
Region 3

cc: Mr. Bill Cox

EXHIBIT D

I - 0 0 2 4 8 7

I-002487



San Francisco State University
1600 Holloway Avenue
San Francisco, California 94132

Department of Biology
Telephone 415/338-1548
Facsimile 415/338-2295

July 22, 1997

Mr. Frank Nelson
Marin Conservation League
55 Mitchell Boulevard, Suite 21
San Rafael, CA 94903

Subject: Restoration of Miller Creek

Dear Mr. Nelson:

Per your request, I am submitting the following comments concerning the biological significance of the Miller Creek landscape and the potential for enhancing this ecosystem by restoring a more natural outlet connection to tidal wetlands in San Pablo Bay.

As you know, I am the Acting Manager for the proposed San Francisco Bay National Estuarine Research Reserve and the Director of Special Projects for the Conservation Biology Program at San Francisco State University. I became familiar with the Miller Creek watershed during an early evaluation phase in which we were scouting for outstanding remnant tidal wetland landscapes around the San Francisco Bay estuary that could serve as reference areas for future wetland restoration efforts.

Examination of an aerial photograph of the San Francisco Bay estuary discloses the dearth of intact natural transition areas between the bay and its surrounding uplands. The Miller Creek drainage is one of the last and best preserved examples of these rare linkages. The Miller Creek watershed contains a large amount of wooded uplands, a relatively intact fluvial plain and riparian forest, and an exceedingly rare system of grasslands, vernal swales and valley oak savannah before encountering the diked baylands and fringing tidal wetlands near the bay margin. From a conservation biology perspective, this mosaic of natural habitats is extremely valuable.

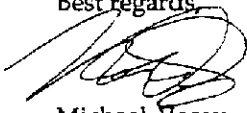
The idea of restoring some semblance of the natural hydrology of Miller Creek at its outlet is, accordingly, highly desirable. Such a connection would further enrich this landscape scale ecosystem and allow functional processes to take place that could ultimately provide for one of the premier landscape units around the estuary. This could be particularly important for adding

aquatic habitat for several fish and invertebrate species. These in turn provide additional food web linkages that will enrich this landscape unit.

In my view, if properly designed and implemented, restoration of the lower reach of Miller Creek will provide a valuable contribution to the goal of recovering the ecological integrity of the San Francisco Bay estuary.

If I can be of further assistance, please let me know.

Best regards,

A handwritten signature in black ink, appearing to read 'Michael Vasey', written over the printed name.

Michael Vasey
Director of Special Projects
Conservation Biology Program



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

27 July 1997

Mr. Frank Nelson
Marin Conservation League
55 Mitchell Boulevard, Suite 21
San Rafael, CA 94903

Subject: Miller Creek Restoration Proposal to CALFED

Dear Mr. Nelson:

This letter is in support of a proposal by the Marin Conservation League to the CALFED Bay-Delta program to study the technical feasibility and cost of restoring Miller Creek. As you are aware, since 1994 I have surveyed over 40 local watersheds comprising over 350 sampling sites within the San Francisco Estuary to assess the ecological health of stream fish and riparian communities and recommend the designation of selected watersheds as high priority for protection and/or restoration. This project was funded by the San Francisco Estuary Project.

Recently, I developed a preliminary list of high priority watersheds for protection and restoration. These streams received a "high" functional index score which was calculated from 11-15 biotic and physical variables recorded for each stream. Miller Creek in Marin County was ranked as a high priority watershed for protection and restoration. Several factors combine to make the Miller Creek watershed an excellent candidate for protection and restoration. These include the absence of upstream dams and large barriers to fish migration, the existence extensive riparian vegetation along much of the creek corridor, good to excellent spawning and rearing habitat for native fishes, the existence of priority aquatic species and habitats, and high water quality. Currently, Miller Creek supports a small run of steelhead (*Oncorhynchus mykiss irideus*), as well as assemblages of other native fishes including California roach (*Hesperoleucus symmetricus*), Sacramento sucker (*Catostomus occidentalis*), threespine stickleback (*Gasterosteus aculeatus*), and prickly sculpin (*Cottus asper*). I believe that with additional efforts focused on restoration of instream habitat and riparian communities within a watershed context, Miller Creek will play an even greater regional role in supporting steelhead and other assemblages of native aquatic organisms.

I believe that the Marin Conservation League proposal to study the technical feasibility and cost of restoring Miller Creek to its historical physical and biotic conditions is well justified.

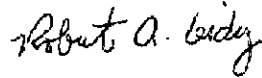
EXHIBIT F

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-2-

Thank you for the opportunity to comment on this excellent proposal. You may contact me at (415) 744-1970 if you would like to discuss my comments further.

Sincerely,



Robert A. Leidy
Weland Science Program Manager



IN REPLY REFER TO:

1-1-97-TA-1746

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
3310 El Camino Avenue, Suite 130
Sacramento, California 95821-6340

July 22, 1997

Mr. Frank Nelson
Marin Conservation League
55 Mitchell Blvd. Suite 21
San Rafael, California 94903

Subject: Feasibility Study for the Restoration of Miller Creek, Marin County, CA

Through conversations with staff, I understand that the Marin Conservation League is pursuing Calfed Category III funding for a feasibility study to restore Miller Creek in Marin County, California. Restoration of the lower reaches of Miller Creek to a natural stream channel would provide valuable instream habitat for Sacramento splittail and steelhead and enrich surrounding riparian, wetland and upland habitats for migratory waterfowl and other migratory birds. A feasibility study will provide the proper guidance so that the restoration plan chosen will provide the greatest benefits to the resource at the most reasonable cost. Miller Creek is one of the more pristine creeks draining into north San Francisco Bay. Restoration of the channelized lower portion of this creek would return this creek to a fully functioning natural system to the benefit of many species of fish and wildlife of concern to the U.S. Fish and Wildlife Service (Service). Therefore, the Service fully supports your pursuit of funding for this project.

If you have any questions, please call Mike Thabault of my staff at (916) 979-2752.

Sincerely,

for Wayne S. White
Field Supervisor

cc: AES-Portland, OR

EXHIBIT G

**LAS GALLINAS VALLEY SANITARY DISTRICT
OF MARIN COUNTY**

BOARD OF DIRECTORS

DOUGLAS A. COLBERT
LEON EDDINGS
BERNIE HEARE
SESTO F. LUCCHI
FRANK SOLOMON, JR.

300 SMITH RANCH ROAD
SAN RAFAEL, CALIFORNIA 94903
TELEPHONE: (415) 472-1734
FAX (415) 499-7715

PETER R. VINE
ENGINEER/MANAGER

BARBARA J. REETZ
DISTRICT SECRETARY

June 26, 1997

Mr. Frank Nelson
Marin Conservation League
55 Mitchell Blvd., #21
San Rafael, CA 94903

Subject: CALFED Study on Restoration of Miller Creek

Dear Mr. Nelson,

We understand that you are applying for funds to study the possibility of restoring Miller Creek to its original course. I confirm that as far as we can see at this point, this would have no adverse effect on the District. In fact we would support it.

Sincerely,



Peter R. Vine
District Manager

PRV/br

C:\WPWIN80\WPDOCS\TEMP\MILLERCR.EEK



EXHIBIT H

I - 0 0 2 4 9 3

I-002493

Marin Conservation League Financial Information -- 1996

Balance Sheet

Assets	12/31/96
Current Assets	
Cash	\$97,868
Accounts Receivable	25,000
Interest Receivable	7,680
Marketable Securities	843,184
Merchandise Inventory	2,213
Deposits and Prepayments	1,702
Total Current Assets	977,647
Fixed Assets	
Land	18,000
Equipment (Net)	13,120
Total Fixed Assets	31,120
Total Assets	<u>\$1,008,767</u>
Liabilities and Fund Balances	
Liabilities	
Accounts Payable	\$25,161
Funds	
General Fund	189,628
Restricted Fund	10,599
Endowment Fund	752,259
Fixed Asset Fund	31,120
Total Funds	<u>\$983,606</u>
Total Liabilities and Fund Balances	<u>\$1,008,767</u>
Support and Expenditures	
Support	
Membership	\$34,490
Grants	80,000
Contributions	113,061
Investment Income	87,767
Special Events (Net)	(3,418)
Merchandise Sales (Net)	(379)
Total Support	<u>311,521</u>
Expenditures	
Salaries	146,363
Payroll Taxes and Benefits	18,089
Professional Services	15,632
Occupancy	29,498
Office Supplies and Expenses	10,363
Travel and Meetings	1,638
Dues and Subscriptions	3,609
Insurance	2,083
Printing	12,233
Program Expenses	30,267
Advertising	650
Miscellaneous	1,305
Depreciation	7,518
Total Expenditures	<u>279,249</u>
Excess Support Over Expenditures	<u>\$32,273</u>
Application of Net Support	
Endowment Fund	\$42,090
Fixed Asset Fund	7,388
Restricted Fund	3,275
General Fund	<u>(20,481)</u>
Total	<u>\$32,273</u>

Marin Conservation League
is a nonprofit organization founded in 1934 to preserve, protect and
enhance Marin County's natural assets for all people.
Our board of directors and committees meet monthly and are
open to the public.

We welcome your membership and participation.

Editor/Designer - Marcy Roth
Art - Jeff Faulk
Paris Printing on recycled
and recyclable paper.

Marin Conservation League
55 Mitchell Blvd. Suite 21
San Rafael, CA 94903
(415) 472-6170

email: mcl@nbn.com
web site: <http://www.nbn.com/md>

Staff

Jerry Edelbrock *Executive Director*
Marcy Roth *Public Education*

Bill Eichhorn *Financial Development*
Dee Weiße *Office Manager*

Board of Directors -- 1997

Susan Stompe *President*
Priscilla Bull *Vice President*
Lawrence Smith *Treasurer*

Joy Dahlgren *Vice President*
Bob Berner *Secretary*

Jean Berensmeier
Carole d'Alessio
Rick Fraites
Jim Goodwin
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Marge Macris
Frank Nelson
Terri Nevins
Eliana Ponce de Leon Reeves
Merritt Robinson
Jean Starkweather
Periana Wood

Michael Calhoun
Grant Davis
Harvey M. Freed
Rachel Hooper
Kathy Lowrey
Jane Mills
Don Neubacher
Karen Nygren
Denis Rice
George Sears
Michael Straus
Ann Thomas

MCL is working to promote ecological alternatives to traditional virgin paper by printing each of our publications on an interesting and affordable eco-sensitive paper. Our last *MCL News* was printed on Lithofect gloss book: 50% recycled, 20% post-consumer waste, and as with all glossy paper currently, entirely recyclable. This annual report is printed on Banana Fibre Paper from Costa Rica Natural Paper (800) 777-3378. It is made from a mixture of unbleached post-consumer paper and a minimum of 5% banana fibre, a by-product of banana harvesting, which poses an ecological threat when dumped. Stay tuned for new MCL publications on paper made from denim scraps, old money and coffee by-products!

EXHIBIT I

NONDISCRIMINATION COMPLIANCE STATEMENT

Questa Engineering Corporation
 COMPANY NAME 1220 Brickyard Cove Rd.
Pt Richmond, Calif.

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

Jeffrey H. Peters
 OFFICIAL'S NAME
7/22/97
 DATE EXECUTED
Jeffrey H. Peters
 PROSPECTIVE CONTRACTOR'S SIGNATURE
Principal
 PROSPECTIVE CONTRACTOR'S TITLE
Questa Engineering Corporation
 PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME
Contra Costa
 EXECUTED IN THE COUNTY OF

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

Marin Conservation League 55 Mitchell Blvd. Suite 21, San Rafael, CA 94903

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

Gerald Edelbrock

DATE EXECUTED

7/24/97

EXECUTED IN THE COUNTY OF

Marin

PROSPECTIVE CONTRACTOR'S SIGNATURE

Gerald Edelbrock

PROSPECTIVE CONTRACTOR'S TITLE

Executive Director

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Marin Conservation League

Agreement No. _____

Exhibit _____

**STANDARD CLAUSES --
SMALL BUSINESS PREFERENCE AND CONTRACTOR IDENTIFICATION NUMBER****NOTICE TO ALL BIDDERS:**

Section 14835, et. seq. of the California Government Code requires that a five percent preference be given to bidders who qualify as a small business. The rules and regulations of this law, including the definition of a small business for the delivery of service, are contained in Title 2, California Code of Regulations, Section 1896, et. seq. A copy of the regulations is available upon request. Questions regarding the preference approval process should be directed to the Office of Small and Minority Business at (916) 322-5060. To claim the small business preference, you must submit a copy of your certification approval letter with your bid.

Are you claiming preference as a small business?

____ Yes*

☒ No

Questa Engineering Corporation
1220 Brickyard Lane Rd
Pt. Richmond, Calif

*Attach a copy of your certification approval letter.

14807